

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AFFIDAVIT

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Commissioner:

I, Dale E. Fiene, herewith affirm as follows:

(A) I was born on April 24, 1945; and I am a U.S. citizen.

(B) I presently live at 337 North Chestnut, Addison, Illinois 60101

(C) In June 1967, I graduated with honors, with a Bachelor of Science Degree in Electrical Engineering from Valparaiso University.

(D) I am a member of Tau Beta PI, an Engineering honors society.

(E) I have practiced Electrical and Electronics Engineering since June 1967 as follows:

1. Between June 1967 through February 1970 as an Associate Systems Analyst Engineer with Honeywell Inc., I developed analog and digital computer simulations of automatic control systems to predict performance and improve stability.

2. Between February 1970 through May 1970 as a Design Engineer and Project Manager with Honeywell Inc., I developed fire and security alarm systems.

3. Between May 1970 and June 1982 as Electrical

Engineering Manager at Fyrnetics Inc., I developed fire alarms, home security products and electronic lighting products.

4. Between June 1982 and April 1987 as Director of Engineering, Lighting Products, with Fyrnetics Inc, I directed the activities of the group that developed a complete line of electronic fluorescent lamp ballasts as well as other electronic inverter type lighting power supplies.

5. Between April 1987 through the present as Electrical Engineering Manager with Seatt Corporation, I manage the development of fire alarms, electronic setback thermostats and electronic lighting products.

(F) In total, I have spent more than 9 years in the design and evaluation of electronic lighting products in general and inverter type power supplies for Halogen Lamps and inverter driven series resonant fluorescent lamp ballasts in particular.

(G) I have been informed to the effect:

(1) that the Commissioner rejected certain claims in an application for a patent for the reason that the Commissioner held the claimed invention to be obvious over prior art;

(2) that, as evidence of obviousness, the Commissioner cited the following prior art references, copies of which have been received by me:

U.S. Patent No. 4,184,128 to Nilssen; and

U.S. Patent No. 4,008,414 to Agnew;

(3) that the Commissioner held that the cited Nilssen patent, with particular reference to Fig. 8 thereof, when considered in view of the cited Agnew patent, rendered the claimed invention obvious;

(4) that the Commissioner held that by making certain obvious modifications of the teachings of the cited Nilssen and Agnew patents, and by making an obvious combination of the results of the two modified teachings, the claimed invention would result; and

(5) that the subject matter of the claimed invention pertains to the art of inverter-type power supplies and ballasting means for gas discharge lamps.

(H) I have not seen the application for patent identified in section (G) above, nor have I seen the claims thereof. More particularly, I have not received a description of the claimed invention.

(I) I have been requested:

(1) to carefully study and consider the cited references in light of the situation described in section (G) above;

(2) to identify each and every instance of what I see as obviously useful and attainable modifications and/or combinations involving the teachings of the cited Nilssen and Agnew references; and

(3) to express each one of those obviously useful and attainable modifications and/or combinations in writing.

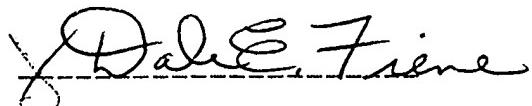
(J) I have performed the study and consideration requested of me in section (I) above, having spent therefore an amount of time that I judged to be reasonable; and I herewith set forth in writing each and every one of those obviously useful and attainable modifications and/or combinations, as follows:

(1) By using the switch incorporated in a socket as described in the Agnew patent, it is possible to protect a series resonant ballast from destroying itself when a two pin "PL" style lamp is used. These lamps incorporate a starter connected between the two filaments and thus do not provide a means of connecting to both ends of each filament. Therefore, the filaments cannot be wired in series with the resonant capacitor as is commonly done to protect a series resonant ballast from lamp removal. This requires a switch which closes when a lamp is in the socket.

(2) A similar situation occurs with instant start lamps, namely that, since two terminals of the filament at each end of a lamp are not available to be wired in series with the resonant circuit, removing the lamp could result in the destruction of a series resonant ballast. Using the switched socket similar to that described in the Agnew patent, which would open when a lamp is removed, would solve this problem.

(3) By using a series resonant ballast or other ballast which operates fluorescent lamps from a constant current source, a number of instant start lamps could be

connected in series. The ends of series connected lamps are then connected across the resonant capacitor. By connecting a across each individual lamp, a simple multi-light level ballast could be implemented. Thus in a four lamp fixture all four lamps would be on if all switches were open. By closing one switch and shorting out one lamp, three of the four lamps would be on. By closing two switches two lamps, etc.



Dale E. Fiene

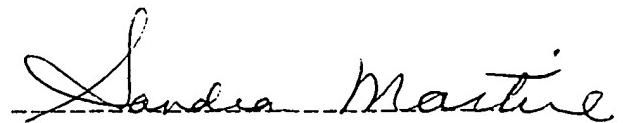
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Sworn to and subscribed before me this 9th day of
April, 1988



Sandra Mastie
Notary Public

My commission Expires: 3-16-1990